



Fledgling Willow Flycatcher, photo taken in Sangamon county. *Photo by Joanna Sblendorio*

@ORC

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## Birds of Conservation Benefit From CREP

*By Bryan Reilly, Illinois Natural History Survey*

When I drove through central Illinois on my way to Champaign in the winter of 2012, I was surprised to see a vast amount of cropland rarely interrupted by forest or grassland. Not surprisingly, a tradeoff of so much land devoted to agriculture that there is less natural habitat available for wildlife populations.

One program in Illinois that is trying to ameliorate this problem is the Conservation Reserve Enhancement program (CREP). If you are unfamiliar, this program pays farmers who voluntarily enroll to remove low quality cropland from production and implement conservation practices on the land, in effect restoring habitat.

In Illinois, this program focuses on cropland near riparian areas in the Illinois and Kaskaskia River drainages in order to reduce sediment and nutrient runoff,

improve water quality, and create and enhance wildlife habitat. Since the program started in 1998 it has created more than 200,000 acres of wildlife habitat in Illinois.

### **Bird Monitoring**

In the spring of 2012 the Illinois Department of Natural Resources and the Illinois Natural History Survey began a monitoring program for birds of the Illinois CREP program. As a graduate student at the Illinois Natural History Survey I worked with my advisor T.J. Benson to develop this monitoring program. We selected our sites using a stratified random design to choose 180 CREP sites larger than 2.8 ha in counties in central and west central Illinois including: Brown, Christian, Fulton, Hancock, Knox, Logan, Macon, McDonough, Menard, Sangamon, and Schuyler. Sample sites were chosen from CP4D (permanent wildlife habitat), CP3A (hardwood tree plantings),

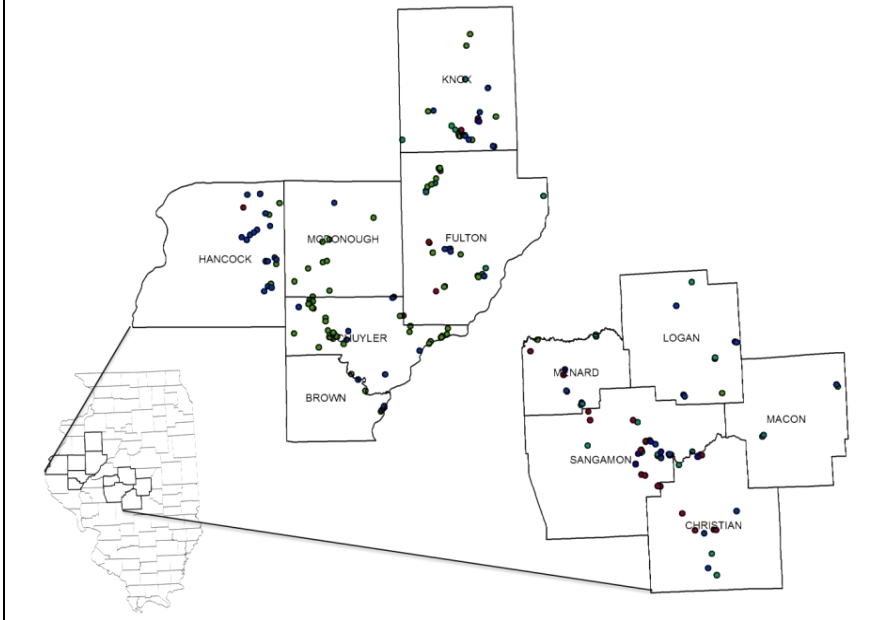


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## STUDY AREA



Locations of sample sites in Illinois.

CP22 (riparian buffer), and CP23 (wetland restoration) conservation practices. At each site we randomly chose between 1-3 locations to conduct point counts for birds. During sampling we wrote down all birds heard or seen and the distance to the bird during a 10 minute period. This type of sampling allows us to estimate the density of observed bird species. During sampling from 2012-2015 we identified 103 bird species within or nearby CREP sample sites. Numerous species of concern were observed during our surveys including: Black-billed and Yellow-Billed Cuckoo, Bell's Vireo, Field Sparrow, Grasshopper Sparrow, Henslow's Sparrow, Northern Flicker, Northern Bobwhite and Yellow-breasted Chat.

Detecting these species of concern at our study sites is particularly important given the Illinois Wildlife Action Plan (IWAP) population goals for these species. Based on our density estimates we have been able to extrapolate the total number of these species using CREP sites in Illinois and preliminary analysis suggests that CREP sites may be providing enough habitat for some species of concern to achieve those population goals. A notable example is the Bell's Vireo whose IWAP goal is increasing the population by 4000 and based on our sampling CREP may be contributing 6800 – 13,600

(170-340% of the goal) birds. Another important example is the Willow Flycatcher whose IWAP goal is increasing the population by 16,000 and based on our sampling CREP may be contributing 10,000 – 20,000 (63 – 125% of the goal) birds. While important, population contributions of CREP sites to the other species of concern listed above have been more modest particularly for grassland birds. As this project moves forward, we plan to determine what management can be applied to CREP sites to improve upon these gains.

In addition to monitoring the number of birds using CREP sites we also carried out nest searches from 2013-2015 at 14 focal sites to understand the breeding ecology of

select shrubland birds including the Bell's Vireo, Brown Thrasher, Field Sparrow, and Willow Flycatcher. Our interest in these birds' nests includes



Bell's Vireo nest with nestlings inside, photo taken in Schuyler county.

*Photo by Bryan Reiley*





Grassland CREP site (CP22) in Knox County, above. *Photo by Bryan Reiley*



Shrubland CREP site (CP3A) in Schuyler County, above  
Male Bell's Vireo in Schuyler county, right. *Photos by Bryan Reiley*

determining their nest survival, brown headed cowbird nest parasitism rates, and fledgling rates. From 2013-2015 we found 499 Bell's Vireo nests, 198 Willow Flycatcher nests, 156 Field Sparrow nests, and 134 Brown Thrasher nests. We are currently in the process of analyzing this data in order to determine how the nest success of these species compares with populations occupying non-restored habitats.

The CREP program in Illinois is providing important habitat for birds of conservation concern. The goal for this large scale monitoring effort is to help the IDNR come up with management solutions to help reduce population declines of species of concern and to utilize this program to achieve IWAP population goals. Monitoring efforts will continue in 2016 expanding the sampling effort to include newly restored CREP sites in the Kaskaskia River drainage.